



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/532,143	01/10/2006	William J. Murphy	JJK-0201 (P1998J017A)	6211
27810	7590	08/19/2008		
ExxonMobil Research & Engineering Company			EXAMINER	
P.O. Box 900			SINGH, PREM C	
1545 Route 22 East			ART UNIT	PAPER NUMBER
Annandale, NJ 08801-0900			1797	
			MAIL DATE	DELIVERY MODE
			08/19/2008	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/532,143	<b>Applicant(s)</b> MURPHY ET AL.	
	<b>Examiner</b> PREM C. SINGH	<b>Art Unit</b> 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04/20/2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>04/20/2005</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 8 recites the limitation "hydrotreated" in claim 1. There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

Art Unit: 1797

2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-7 and 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chester et al (US Patent 4,575,416).

4. With respect to claim 1, Chester discloses a method of hydrodewaxing feeds to produce a lube base stock having improved low temperature properties (See abstract and column 3, lines 24-35), comprising:

(a) contacting the feed with a mixed powder pellet catalyst under hydrodewaxing conditions (See column 10, lines 39-57), said catalyst comprising:

(i) at least one first component selected from 10 and 12 ring molecular sieves having a metal hydrogenation component dispersed thereon (See column 6, lines 37-49; column 9, lines 9-16);

(ii) at least one second component selected from 10 and 12 ring molecular sieves having a metal hydrogenation component dispersed thereon (See column 6, lines 37-49; column 9, lines 9-16; column 8, lines 27-32).

Chester invention does not specifically disclose (iii): the proportion of first and second components decided by evaluation of conversion of methyl cyclohexane (MCH test), however, the invention does disclose the ratio of the first and second components (See column 10, lines 38-57). Thus, it would have been obvious to one skilled in the art at the time of invention to use any standard method, including MCH test as claimed, for proper ratio of the first and second components to achieve superior dewaxing activities. It is expected that any standard technique will be equally effective to choose an optimum ratio of the first and the second components.

5. With respect to claims 2 and 3, Chester discloses 10 and 12 ring molecular sieves useful in the invention are selected from the list (See Tables in column 7 and 8, lines 1-42). Chester also discloses that the zeolites are alumino silicates (See column 8, lines 48-57). Although Chester does not specifically disclose alumino phosphates, it is known to those skilled in the art that the intermediate pore molecular sieves also belong to alumino phosphates (evidenced by Miller: US Patent 5,149,421, abstract).

6. With respect to claims 4 and 5, Chester discloses that the first component is selected from ZSM-5, ZSM-11, ZSM-23 and ZSM-35 and the second component from

ZSM-4, ZSM-5, ZSM-11, ZSM-12, ZSM-20, ZSM-22, ZSM-23, ZSM-35, ZSM-38 and ZSM-48 (See column 8, lines 22-32).

Chester does not specifically disclose ITQ-13 and ZSM-57 as the first component, however, it is to be noted that ITQ-13 and ZSM-57 are also intermediate pore molecular sieves (evidenced by enclosed web pages) similar to the other intermediate pore molecular sieves disclosed by Chester. Thus, it would have been obvious to one skilled in the art at the time of invention to modify Chester invention and use any intermediate pore molecular sieve, including ITQ-13 and ZSM-57 as claimed, because they are all expected to be functionally similar absent any unexpected results. An express suggestion to substitute one equivalent component or process for another is not necessary to render such substitution obvious. See *In re Fout*, 675 F.2d 297, 213 USPQ 532 (CCPA 1982).

7. With respect to claim 6, Chester invention does not specifically disclose evaluation of the second component in the conversion of methylcyclohexane (MCH test). Since Chester is using intermediate pore molecular sieves as the second component similar to the Applicant's claim, the molecular sieves used in Chester invention should inherently have similar performance in the MCH test.

8. With respect to claim 7, Chester discloses the pour point of dewaxed oil up to 45°F (7°C) (See Table 1, column 11, lines 30-50).

9. With respect to claims 9-12, Chester discloses that the metal hydrogenation component is at least one of a Group VI or Group VIII metal, selected from platinum and palladium (See column 8, lines 52-68). Chester also discloses that the hydrogenation component is dispersed in an amount ranging from about 0.01 to 25 wt% (See column 9, lines 17-25).

10. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chester et al (US Patent 4,575,416) in view of Miller (US Patent 5,149,421).

11. With respect to claim 8, Chester invention does not specifically disclose hydrotreating conditions, however, the invention does disclose that hydrotreating (hydrofinishing) can be done to reduce the nitrogen and sulfur content or improve the color of the lubricating oil stock (See column 2, lines 1-4).

Miller discloses a process similar to Chester invention for hydrodewaxing feeds to produce a lube base stock with improved low temperature properties using similar catalyst and similar operating conditions (See column 2, lines 34-68; column 3, lines 1-26). Miller further discloses hydrofinishing (hydrotreating) conditions using temperature from about 190-340°C, pressure from about 400 to 3000 psig, hydrogen treat gas rate from about 400 to 1500 scf/bbl, and space velocity from 0.1 to 20 hr<sup>-1</sup> (See column 14, lines 30-46).

Thus, it would have been obvious to one skilled in the art at the time of invention to modify Chester invention and specify the hydrofinishing conditions as disclosed by

Miller for proper control of hydrofinishing process and produce a lube base stock with reduced nitrogen and sulfur contents and improved color.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PREM C. SINGH whose telephone number is (571)272-6381. The examiner can normally be reached on 7:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Application/Control Number: 10/532,143  
Art Unit: 1797

Page 8

/In Suk Bullock/  
Examiner, Art Unit 1797